

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants: Reid et al.
Serial No.: 10/586,291
For: SECURITY SUBSTRATE INCORPORATING ELONGATE SECURITY
ELEMENTS
Filed: March 14, 2007
Examiner: Justin Lewis
Art Unit: 3725
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Attorney Docket No.: 0002978USU/2297

Mail Stop Appeal Brief - Patents
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Dear Sir:

Further to the Notice of Appeal filed on March 28, 2011, Appellants are filing this Appeal Brief under 35 U.S.C. §134 and in accordance with the provisions of 37 C.F.R. §41.37(a), and believe that the Appeal Brief complies with the requirements set forth in 37 C.F.R. §41.37(c).

(i) Real Party in Interest

The real party in interest is De La Rue International Corporation Limited. Ownership by De La Rue International Corporation Limited is established by assignment document recorded for this application on March 14, 2007 on Reel 019089, Frame 0968.

(ii) Related Appeals and Interferences

The undersigned attorney is not aware of any patent applications or patents involved in any related appeal or interference proceeding.

(iii) Status of the Claims

Claims 4, 8, and 23 have been cancelled. Claims 1-3, 5-7, 9-22 and 24-34 are pending in this application, and are the subject of this Appeal. Claims 1, 18, and 33 are independent.

Claims 1-3, 5-7, 9-10, 18-22, 24, and 30-34 stand rejected under 35 U.S.C. §103(a) over U.S. Patent Publication No. 2003/0104176 to Schwenk ("Schwenk").

Claims 1-3, 5-7, 9-10, 18-22, 24, and 30-34 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 4,290,630 to Lee ("Lee").

Claims 11-17 and 25-29 stand rejected under 35 U.S.C. §103(a) over Schwenk in view of U.S. Patent No. 6,471,247 to Hardwick et al. ("Hardwick").

Claims 11-17 and 25-29 stand rejected under 35 U.S.C. §103(a) over Lee in view of Hardwick.

(iv) Status of Amendments

An Office Action was mailed on October 27, 2010 rejecting claims 1 -3, 5-7, 9-22 and 24-34. No amendment to any of the claims was proposed subsequent to the Office Action.

(v) Summary of Claimed Subject Matter

The claimed invention set forth in **independent claim 1** provides a security substrate that includes a substrate (10) and at least two elongate security elements (11a, 11b). The elongate security elements (11a, 11b) each have a width of less than or equal to 6mm. See page 4, lines 8-10; Figure 2.

The security elements (11a, 11b) are at least partially embedded within the substrate (10) and run substantially parallel to each other with a gap (14) therebetween of no greater than 10mm. See page 4, lines 11-13; Figure 2. The security elements (11a, 11b) and the gap (14) occupy a zone that has a total cross-directional width that is less than or equal to 14mm. See page 4, lines 13-15; page 13, lines 20-21; Figure. 2. The security elements (11a, 11b) have different security features. See page 14, lines 8-14; Figure 2.

The claimed invention set forth in **independent claim 18** provides a security article having a substrate (10) and at least two elongate security threads (11a, 11b) that each have a width of less than or equal to 6mm. See page 3, lines 13-14; page 4, lines 8-10; Figure 2. The security threads (11a, 11b) are at least partially embedded within the substrate (10) and run substantially parallel to each other with a gap (14) therebetween of no greater than 10 mm. See page 4, lines 11-13; Figure 2. The security threads and the gap occupy a zone that has a total cross-directional width that is less than or equal to 18mm. See page 13, lines 17-20; Figure 2.

The claimed invention set forth in **independent claim 33** provides a security substrate having a substrate (10), a first elongate security thread (11a), and a second elongate security thread (11b). See page 3, lines 13-14; page 12, lines 30-31; Figure 2. The substrate (10) has a zone with a cross-directional width of less than or equal to 18 mm. See page 13, lines 17-20; Figure 2. The first elongate security thread (11a) is at least partially embedded within the substrate (10), is disposed in the zone, and has a first security feature. See page 4, lines 10-13, page 14, lines 8-14; Figure 2. The second elongate security thread (11b) is at least partially embedded within the substrate (10), is disposed in the zone, and has a second security feature. See page 4, lines 10-13, page 14, lines 8-14; Figure 2. The first and second elongate security threads (11a, 11b) run substantially parallel to each other within the zone with a gap (14) therebetween of no greater than 10mm. See page 4, lines 11-13. The first and second security features have a difference. See page 14, lines 8-14; Figure 2.

(vi) Grounds of Rejection to be Reviewed on Appeal

The first ground presented for review is the propriety of the rejection of claims 1-3, 5-7, 9-22, 24, and 30-34 under 35 U.S.C. §103(a) over Schwenk.

The second ground presented for review is the propriety of the rejection of claims 1-3, 5-7, 9-22, 24, and 30-34 under 35 U.S.C. §103(a) over Lee.

(vii) Argument

(a) First Ground – Rejection of claims 1-3, 5-7, 9-22, and 24-34 under 35 U.S.C. §103(a) over Schwenk.

(1) Independent claim 1, as well as dependent claims 2-3, 5-7, and 9-17, stand or fall together

Claim 1 requires, in part, “at least two security elements” that are “at least partially embedded within said substrate” and “run substantially parallel to each other” (emphasis added).

The Office Action asserts that the areas and the subareas 7a-7d and 8a-8b of Schwenk read on the claimed security elements.

Appellants disagree. Specifically, Appellants submit that the Office Action has misconstrued the teachings of Schwenk to improperly conclude that claim 1 is obvious.

Schwenk is directed at a “security paper with at least two types of mottled fibres” (Abstract; Figure 2a, A & B). In particular, Schwenk discloses “three strip-like control areas 8a, 8b, and 8c, indicated by dash-dotted lines” (page 2, para 0034, Figure 1). Further, “[l]ocated within the three strip like control areas 8a, 8b, 8c are strip-like subareas 5a, 5b, 5c in which mottled fibres are introduced into the security paper 2 (page. 2, para. 0035; Figure 1).

In addition, Schwenk provides: “the boundary lines of the strip-like subareas 5a, 5b, 5c are illustrated by continuous lines in figure 1. However, “the continuous lines serve merely for illustration and are not present on an actual security document” (emphasis added) (page 2-3, para. 0035). Referencing figure 2, Schwenk also provides subareas 7a-7d, analogous to subareas 5a-5c, located within control areas 8a-8d in figures. 2a-2b (page 3, para. 0037).

Schwenk provides mottled fibres of types A, B and D deposited within subareas 7a-7b “by means of a pipe, whose end has a special exit nozzle” (page 2, para 0019; see Figure 2a-2b). With reference to figures 2a-2b, Schwenk demonstrates that mottled fibres of types A, B and D are disposed in a substrate in a random fashion within subarea 7a-7b. In addition, Schwenk describes that mottled fibres are deposited by means of a pipe during the production of vat-made paper, or, alternatively, “in the case of manufacture of fourdrinier papers, the fibres can be applied in a similar way [to the vat-made paper] to the fourdrinier wire” (page 2, para. 0018-0020).

In sum, Schwenk discloses two distinct components, namely the “mottled fibres” and the “control areas”.

In Schwenk, the “mottled fibres” are not disclosed or suggested as being parallel to one another. Instead, Schwenk illustrates mottled fibres of types A, B and D as being randomly disposed within subareas 7a-7b (Figures 2a-2b).

Further, the “control areas” are not disclosed or suggested by Schwenk as being embedded within the substrate. In fact, Schwenk itself specifically discloses that these areas are “merely for illustration and are not present on an actual security document” (emphasis added) (page 2-3, para. 0035).

Accordingly, Schwenk merely discloses “control areas” that are acknowledged as merely for illustration and, not, present on an actual document. Thus, the control areas clearly lack any portion that could reasonably be considered to be “embedded”. Schwenk also discloses “mottled fibres” that are embedded within the substrate, but the “mottled fibres” do not run parallel to each other. Simply stated, no portion of Schwenk discloses or suggests security elements that are both “partially embedded” and “parallel” as required by claim 1.

Moreover, claim 1 further requires that the at least two elongate security elements have “a gap therebetween of no greater than 10mm” and occupy along with the gap “a zone that has a total cross-directional width that is less than or equal to 14mm” (emphasis added).

The Office Action correctly acknowledges that Schwenk fails to disclose the claimed ranges. Instead, the Office Action asserts that the claimed ranges would be obvious to those skilled in the art.

The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). See also *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”)

Appellants respectfully submit that the Office Action fails to meet its burden of establishing a *prima facie* case of obviousness since the Office Action fails to determine the level of skill in the art. Accordingly, the Office Action fails to establish the underlying factual determinations as to the level of skill in the art such that the conclusion that the ranges would be obvious to such a person is unfounded.

Further, the Office Action has presented no line of reasoning, and we know of none, as to who one skilled in the art is or why that person viewing the collective teachings of Schwenk would have found it obvious to selectively pick and choose various gap and zone widths to arrive at the claimed invention.

Furthermore, Appellants submit that the claimed combination does much more than yield predictable results. The present application discloses that:

“It has been found that, by placing two discrete security elements in close proximity within a document provides significant public security benefits over wide, twisted, braided or woven security element constructions. Surprisingly when two or more security elements are placed side by side they dramatically increase the overall visual impact of the security elements compared to having a single security element, even if that single security element is as wide as the combined width of the security elements in close proximity to one another.” (See page 4, lines 14-22).

Thus, the claimed gap and zone width have been very carefully selected to provide the intended visual impact, whereas the cited art fails to recognize these variables as being necessary for such a result.

Appellants further submit that Hardwick does not cure the aforementioned or other defects and deficiencies present in the disclosure of Schwenk. Specifically, the Office Action fails to assert that Hardwick discloses or suggests the security elements required by claim 1. Rather, the Office Action merely asserts that Hardwick discloses security substrates with windows.

Thus, for the reasons provided above, Schwenk, alone, or in combination with Hardwick, does not disclose or suggest claim 1 or claims 2-3, 5-7, and 9-17 that depend therefrom. Accordingly, Appellants respectfully request, with regard to Schwenk, alone, or in combination with Hardwick, that the Board of Appeals reverse the rejection of claims 1-3, 5-7, and 9-17.

(2) Independent claims 18 and 33, as well as dependent claims 19-22, 24-32, and 34 stand or fall together

Claim 18 requires, in part, “at least two elongate security threads” that are “at least partially embedded within said substrate” and run “substantially parallel to each other” (emphasis added).

Similarly, claim 33 requires, in part, “a first elongate security thread” and “a second elongate security thread” that are “at least partially embedded within said substrate” and “run substantially parallel to each other” (emphasis added) .

The Office Action asserts that the areas and the subareas 7a-7d and 8a-8b of Schwenk read on the claimed security threads.

Appellants disagree. Again, Appellants submit that the Office Action has misconstrued the teachings of Schwenk to improperly conclude that claims 18 and 33 are obvious.

Simply stated, no portion of Schwenk discloses or suggests security threads that are both “partially embedded” and “parallel” as required by claims 18 and 33. Instead, Schwenk discloses two distinct components, namely the “mottled fibres” and the “control areas” where the mottled fibres are merely randomly disposed and the control areas are merely for illustration and are not present on an actual security document (See Figures 2a-2b; page 2-3, para. 0035)

Moreover, claims 18 and 33 require “security **threads**” and, thus, differ from claim 1 which requires “security **elements**”.

Presuming, arguendo, that the “mottled fibres” and “control areas” of Schwenk were to be assumed to be “security elements” of claim 1, Appellants submit that the same “mottled fibres” and “control areas” are clearly not “security **threads**” as required by claims 18 and 33.

First, Appellants submit that such an assertion would be contrary to, or inconsistent with, the interpretation of the elements of Schwenk necessary to assert a rejection of the “security element” element of claim 1 discussed in detail above.

Second, Appellants submit that the “mottled fibres” of Schwenk cannot reasonably be considered to be “elongate threads” as required by claims 18 and 33. In fact, the distinction between “mottled fibres” and “elongate threads” is recognized and appreciated by the disclosure of Schwenk.

Specifically, Schwenk discloses in its description of the prior art that: “mottled fibres can also be twisted or interwoven to form security threads” (emphasis added) (page 1, para. 0004). Thus, Schwenk recognizes that mottled fibres and security threads are different from one another and, further, Schwenk chooses to avoid the problems inherent in the use of security threads by using only fibres. As such, Appellants submit that Schwenk teaches away from the “security **threads**” required by claims 18 and 33.

Moreover, claims 18 and 33 each require a gap and a total cross-directional width that is not disclosed or suggested by Schwenk. Specifically, claims 18 and 33 each require that the security

threads have “a gap therebetween of **no greater than 10mm**” and a zone with a “cross-directional width that is **less than or equal to 18 mm**” (emphasis added).

Again, the Office Action correctly acknowledges that Schwenk fails to disclose the claimed ranges. Instead, the Office Action asserts that the claimed ranges would be obvious to those skilled in the art but failed to meet its burden of establishing a *prima facie* case of obviousness because the Office Action has failed to determine the level of skill in the art by failing to establish the underlying factual determinations as to the level of skill in the art such that the conclusion that the ranges would be obvious to such a person is unfounded.

Further, the Office Action has presented no line of reasoning, and we know of none, as to who one skilled in the art is or why that person viewing the collective teachings of Schwenk would have found it obvious to selectively pick and choose various gap and zone widths to arrive at the claimed invention.

Furthermore, Appellants submit that the claimed combination does much more than yield predictable results, where the claimed gap and zone width have been very carefully selected to provide the intended visual impact, where the cited art fails to recognize these variables as being necessary for such a result.

Appellants submit that Hardwick does not cure the aforementioned or other defects and deficiencies present in the disclosure of Schwenk. Specifically, the Office Action fails to assert that Hardwick discloses or suggests the security threads required by claims 18 and 33. Rather, the Office Action merely asserts that Hardwick discloses security substrates with windows.

Thus, for the reasons provided above, Schwenk alone or, in combination with Hardwick, does not disclose or suggest claims 18 and 33 or claims 19-22, 24-32, and 34 that depend therefrom. Accordingly, Appellants respectfully request that, with regard to Schwenk, or Schwenk in combination with Hardwick, the Board of Appeals reverse the rejection of claims 18-22 and 24-34.

(b) Second Ground – Rejection of claims 1-3, 5-7, 9-22, and 24-34 under 35 U.S.C. §103(a) over Lee.

(1) Independent claims 1, 18 and 33, as well as dependent claims 2-3, 5-7, 9-17, 19-22, 24-32, and 34, stand or fall together

Independent claim 1 recites, in part, "at least **two** security elements are at least partially **embedded within** said substrate"(emphasis added). Claim 18 recites, in part, "at least **two** security threads are at least partially **embedded within** said substrate" (emphasis added). Claim 33 recites, in part, "a **first** elongate security thread" and "a **second** elongate security thread" that are "at least **partially embedded** within said substrate" and "**run substantially parallel** to each other" (emphasis added).

The Office Action asserts that a "thread 2" of Lee reads on the claimed security elements and threads.

Appellants disagree. Specifically, Appellants submit that the Office Action has misconstrued the teachings of Lee to improperly conclude that claims 1, 18, and 33 are obvious.

First, Appellants submit that Lee fails to disclose more than one security element or security thread as claimed.

Rather, Appellants submit that Lee merely discloses the different shapes of a **single thread** that can be used, but there is no disclosure of **more than one thread in a single document**.

The Office Action maintains that the following portion of Lee supports the interpretation that Lee discloses multiple threads in a single document:

"The threads 2, after separation, may be cut into suitable lengths which **are** then inserted into or affixed to the surface of the sheet material of the documents concerned (emphasis added)." See col. 3, lines 48-51.

Specifically, the Office Action asserts that the use of the plural “threads” and the corresponding verb “are” support the position that Lee discloses placing more than one thread into one document.

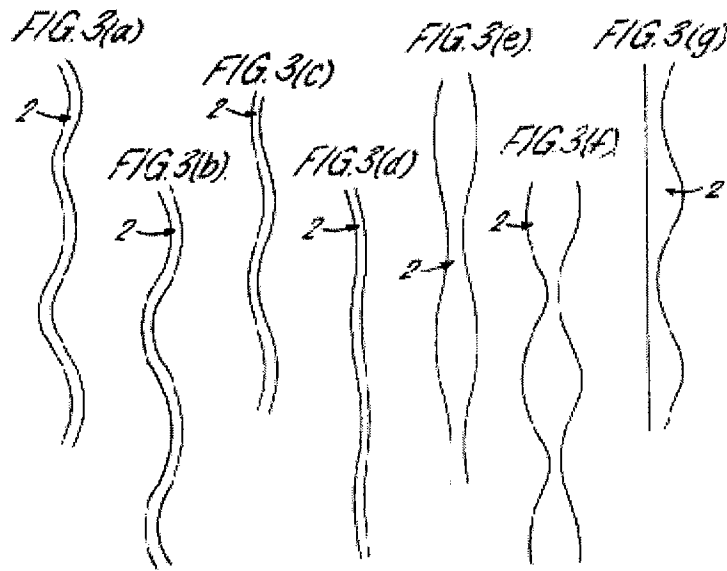
Appellants submit that such an interpretation ignores the plain language of the particular sentence, as well as the entirety of the disclosure by Lee. Rather than the strained interpretation of Lee offered by the Office Action, Appellants maintain that the use of the plural “threads” and “are” are merely used to conform these terms to the fact that this sentence is directed to multiple “threads” in multiple “documents” and not to multiple threads within a single document.

In Lee, Figures 5 to 8 all show examples of a banknote and each of these embodiments contain only a single thread 2, which has differently shaped edges on either side. However, none of the embodiments disclosed or suggested by Lee includes more than one elongate security element or thread as required by claims 1, 18, and 33.

In fact, Appellants submit that Lee fails to provide an enabling disclosure on how one could provide more than one elongate security element or thread partially embedded as required by claims 1, 18, and 33.

Assuming for the sake of discussion that Lee stands for the proposition asserted (i.e., Lee has two threads in one document), which is clearly erroneous, Appellants submit that Lee fails to disclose or suggest that these threads are embedded “parallel” to one another.

The Office Action asserts that Figures 3a-g of Lee, provided below, discloses multiple threads in the same substrate embedded parallel to each other. In essence the Examiner is basing the rejection on the fact that Figures 3a-3g are laid out next to one another in a manner that appears to illustrate parallel threads as seen below. When Appellants requested clarification of this point in the Interview dated March 9, 2011, the Examiner asserted that Figures 3a-3g, when viewed in combination with one another, illustrate threads embedded parallel to one another.



Appellants submit the rejection of claims 1, 18, and 33 is unsupported by the disclosure of Lee and is contrary to the controlling case law regarding the use of drawings in rejections.

First, Lee, as discussed above, merely discloses a single thread within a single document. In particular, with reference to figures 3a -3g, Lee provides: “FIGS. 3a to 3g illustrate seven threads of different shapes...” (emphasis added) (col. 3, lines 60-61). That is, Lee provides each of Figures 3a-3g to highlight “different shapes”. Further, Lee assigns a different figure number to each of Figures 3a-3g. In this fashion, Lee merely arranges the seven different embodiments illustrated in Figures 3a-3g proximate to one another. However, Appellants submit that such an arbitrary arrangement does not disclose nor suggest embedding a multiple threads in a parallel fashion in a single document in the manner asserted.

Additionally, it is well established that while patent drawings are not drawn to scale unless specifically disclosed, they may nevertheless be used to establish relationships or proportions between the various components which are clearly depicted therein. See, e.g., *In re Schreiber*, 128 at 1478-79,44 USPQ2d at 1431-32, *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1565, 19 USPQ2d 1111, 1118 (Fed. Cir. 1991), *In re Mraz*, 455 F.2d 1069, 1072, 173 USPQ 25, 27 (CCPA 1972) and *In re Heinle*, 342 F.2d 1001, 1007, 145 USPQ 131, 136 (CCPA 1965).

In the present rejection, the Office Action has taken this well establish principle *beyond* its logical conclusion. Namely, the Office Action has concluded that the arrangement of the drawings themselves, i.e., Figures. 3a, 3b, 3c, 3d, 3e, 3f and 3g, with respect to one another within the patent, even when these drawings are clearly disclosed as illustrating different embodiments, establishes a relationship between the different embodiments. Appellants maintain that this conclusion is contrary to the law regarding this matter.

In addition to the above distinctions, claims 18 and 33 further recite specific ranges. In particular, as discussed above, claims 18 and 33 each require that the security threads have “a gap therebetween of **no greater than 10mm**” and a zone with a “cross-directional width that is **less than or equal to 18 mm**” (emphasis added).

The Office Action correctly acknowledges that Lee, similar to Schwenk, fails to disclose the claimed ranges. Instead, the Office Action asserts that the claimed ranges would be obvious to those skilled in the art.

Discussion of Schwenk, with respect to the claimed ranges in independent claim 1, equally applies to the claimed ranges in independent claims 18 and 33. In particular, Appellants respectfully submit that the Office Action has failed to meet its burden of establishing a *prima facie* case of obviousness because the Office Action has failed to determine the level of skill in the art. Accordingly, the Office Action has failed to establish the underlying factual determinations as to the level of skill in the art such that the conclusion that the ranges would be obvious to such a person is unfounded.

An above-discussion of Schwenk, with respect to claimed ranges, equally applies a rejection of the claimed ranges with respect to Lee. That is, the Office Action has presented no line of reasoning, and we know of none, as to who one skilled in the art is or why that person viewing the collective teachings of Lee would have found it obvious to selectively pick and choose various widths, gaps, and zones to arrive at the claimed invention.

Furthermore, Appellants reiterate that the claimed combination does much more than yield predictable results (page 4, lines 14-22). The present application discloses that:

“It has been found that, by placing two discrete security elements in close proximity within a document provides significant public security benefits over wide, twisted, braided or woven security element constructions. Surprisingly when two or more security elements are placed side by side they dramatically increase the overall visual impact of the security elements compared to having a single security element, even if that single security element is as wide as the combined width of the security elements in close proximity to one another.” (See page 4, lines 14-22).

The claimed widths, gaps, and zones have been very carefully selected to provide the intended visual impact, where the cited art fails to recognize these variables as being necessary for such a result. Thus, Lee failing to suggest or disclose any width, gap, and zone, fails to disclose claims 1, 18 and 33.

Appellants further submit that Hardwick does not cure the aforementioned or other defects and deficiencies present in the disclosure of Schwenk. Specifically, the Office Action fails to assert that Hardwick discloses or suggests the security elements required by claims 1, 18 and 33. Rather, the Office Action merely asserts that Hardwick discloses security substrates with windows.

Thus, for the several reasons provided above, Lee, alone, or in combination with Hardwick, fails to disclose or suggest independent claims 1, 18, or 33, and dependent claims 2-3, 5-7, 9-17, 19-22, 24-32, and 34 that depend therefrom. Accordingly, Appellants respectfully request that, with regard to Lee, alone, or in combination with Hardwick, the Board of Appeals reverse the rejection of claims 1-3, 5-7, 9-22, and 24-34.

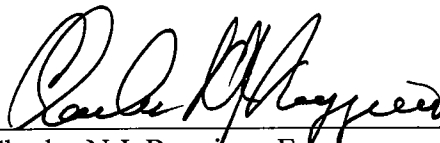
Summary

In summary, Appellants respectfully request that the Board of Appeals reverse the rejections of claims 1-3, 5-7, 9-22 and 24-34, thereby enabling all of the pending claims to be allowed.

Respectfully submitted,

MAY 27, 2011

Date



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(viii) Claims Appendix

Claims 1-3, 5-7, 9-22 and 24-34, herein on appeal, are set forth below.

1. A security substrate comprising:
a substrate; and
at least two elongate security elements each having a width of less than or equal to 6mm,
wherein said at least two security elements are at least partially embedded within said substrate
and run substantially parallel to each other with a gap therebetween of no greater than 10mm,
wherein said at least two security elements and said gap occupy a zone that has a total cross-
directional width that is less than or equal to 14mm, and
wherein said at least two security elements have different security features.
2. A security substrate as claimed in claim 1, wherein said at least two security elements each
have a width of less than or equal to 4mm.
3. A security substrate as claimed in claim 2, wherein said at least two security elements each
have a width of less than or equal to 2mm.
5. A security substrate as claimed in claim 1, wherein said gap is greater than or equal to
1mm.
6. A security substrate as claimed in claim 5, wherein said gap is greater than or equal to
2mm.
7. A security substrate as claimed in claim 1, wherein said at least two security elements have
identical security features.
9. A security substrate as claimed in claim 1, wherein said at least two security elements
wander from a linear path in a cross-direction of said substrate, and wherein said cross-directional
width of said zone includes an amplitude of said wander.

10. A security substrate as claimed in claim 1, wherein at least one of said at least two security elements are wholly embedded within said substrate.

11. A security substrate as claimed in claim 1, wherein at least one of said at least two security elements are exposed at windows in at least one surface of said substrate.

12. A security substrate as claimed in claim 11, wherein all of said at least two security elements are exposed via the same window.

13. A security substrate as claimed in claim 11, wherein each of said at least two security elements is exposed at separate windows to those at which the other security element is exposed.

14. A security substrate as claimed claim 13, wherein said window via which one of said at least two security elements is exposed is in register with said window via which an other of said at least two security elements is exposed.

15. A security substrate as claimed claim 13, wherein said window via which one of said at least two security elements is exposed is not in register with said window via which an other of said at least two security elements is exposed.

16. A security substrate as claimed in claim 1, wherein each of said at least two security elements is provided with at least one security feature which is registered with at least one security feature on an other of said at least two security elements.

17. A security substrate as claimed in claim 1, wherein each of said at least two security elements is provided with at least one security feature which is registered with at least one security feature on said substrate.

18. A security article comprising:
a substrate; and
at least two elongate security threads each having a width of less than or equal to 6mm,
wherein said at least two security threads are at least partially embedded within said substrate and
run substantially parallel to each other with a gap therebetween of no greater than 10mm, and
wherein said at least two security threads and said gap occupy a zone that has a total cross-
directional width that is less than or equal to 18mm.
19. A security substrate as claimed in claim 1, wherein said substrate is plastic.
20. A security substrate as claimed in claim 19, wherein said substrate is a filmic plastic.
21. A security substrate as claimed in claim 1, wherein said substrate is a mix of paper and
plastic fibres.
22. A security substrate as claimed in claim 1, wherein said substrate is paper.
24. A security article as claimed in claim 18, wherein said security article is a banknote.
25. A security substrate as claimed in claim 1, wherein at least one of said two security
elements is exposed in at least one hole or aperture through the substrate.
26. A security substrate as claimed in claim 25, wherein all of said at least two security
elements are exposed at the same hole or aperture.
27. A security substrate as claimed in claim 25, wherein each of said at least two security
elements is exposed in a separate hole or aperture to those at which the other security thread is exposed.
28. A security substrate as claimed in claim 27, wherein said hole or aperture via which one of
said at least two security elements is exposed is in register with said hole or aperture via which another
of said at least two security elements is exposed.

29. A security substrate as claimed in claim 27, wherein said hole or aperture via which one of said at least two elements is exposed is not in register with said hole or aperture at which another of said at least two security elements is exposed.

30. A security article as claimed in claim 18, wherein said security article is a passport.

31. A security article as claimed in claim 18, wherein said security article is a certificate.

32. A security article as claimed in claim 18, wherein said security article is a document of value.

33. A security substrate comprising:

a substrate having a zone with a cross-directional width of less than or equal to 18 mm;

a first elongate security thread at least partially embedded within said substrate and disposed in said zone, said first elongate security thread having a first security feature; and

a second elongate security thread at least partially embedded within said substrate and disposed in said zone, said second elongate security thread having a second security feature, said first and second elongate security threads running substantially parallel to each other within said zone with a gap therebetween of no greater than 10mm, wherein said first and second security features have a difference.

34. A security article as claimed in claim 32, wherein said difference is selected from the group consisting of opposing holographic movement effects, mutually opposed holographic image replay, different information, different viewing angles, different visual impression, different thermochromic transition temperatures, different colourshift features, and opposed colour switch features.

(ix) Evidence Appendix

None.

(x) Related Proceedings Appendix

None.